

3 May 1963

MEMORANDUM FOR THE RECORD

SUBJECT : Foreign Object Damage in OXCART Program

1. During mid-winter a number of cases of foreign object damage (FOD) to J-58 engines installed in the A-12 resulted in the return for overhaul of a number of these J-58 engines. A careful investigation of the possible causes of this FOD indicated that this resulted from small objects (nuts, bolts, pieces of metal) having been left in the nacelle during air frame construction at Burbank. As a corrective measure, screens were installed in the air inlets in order to prevent sucking any such materials above a certain size into the engine. In addition, rigorous quality control and inspection procedures were adopted at the plant and [redacted] where the aircraft were being worked on in order to eliminate insofar as possible any additional materials being left in the aircraft structure. Special shake tests were instituted on the completed nacelles in order to attempt to remove any materials which might have been left behind, but this practice would not have had any effect on the first 6 aircraft presently available.

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2. After 16 March no further cases of FOD occurred until 20 April, but since that time 5 cases of damage to J-58 engines have occurred. Two of these were on the newly-assembled aircraft # 6 and could be reasonably explained on the basis of materials remaining from air frame fabrication at Burbank prior to the institution of the new procedures. However, two have occurred on aircraft # 1 which has had some 60 hours of flight time, and, therefore are difficult to attribute to materials remaining from the original construction. This aircraft has in recent days been undergoing a considerable amount of maintenance in the process of modifying air intakes and installation of instrumentation in order to solve the current mismatch in the engine air intake system. It seems likely that the foreign objects resulted from activity during this repair period. Lockheed has stated that rigorous inspection procedures were in existence at this time and is at a loss to explain

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how this could have accidentally occurred. The possibility of industrial sabotage is in this case, therefore, very real. Careful security investigations are now in progress, and the technical analysis of all possible causes and fixes for this FOD is presently under way. Until the situation can be fully evaluated, all A-12 aircraft with J-58 engines have been grounded.

Signed Herbert Scoville, Jr.

**HERBERT SCOVILLE, JR.**  
Deputy Director  
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**Distribution:**

- # 1 and # 2 - ADCI (hand carried by Dr. Scoville)
- # 3 - AD/OSA
- # 4 & # 5 - DDR Files

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